SIERRA VIEW DAIRY

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Via Fax and U.S. Mail

December 20, 2006

Polly Lowry
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RE: Comments to Tentative General Order draft for Waste Discharge Requirements for Existing Milk Cow Dairies

CC: David Sholes

Dear Ms. Lowry,

I have been working closely with Ken Jones and David Sholes of the Central California Regional Water Quality Control Board, and I encourage you to contact these gentlemen regarding my comment below.

My comment is on the Monitoring Provision, Item 26, which states:

Process wastewater composite samples shall be collected as follows:

a. *A representative composite sample of process wastewater shall be prepared based on a minimum of three times-series samples collected during an irrigation event that are representative of the beginning, middle and end of the process wastewater discharge. These samples shall be combined in a single container, mixed, and poured into a clean container provided by or approved by the laboratory that will receive the samples. Containers that are reused shall be washed with soap and thoroughly rinsed with clean (tap) water.*

b. *The samples shall be collected at a point that is prior to any dilution or blending with irrigation water and shall be representative of the process wastewater applied to the land application area.*

The number of wastewater application events at Sierra View Dairy in 2006 was 54. If composite samples had been collected and processed as described above, the cost would have been close to $25,000. This is computed as follows: Three sub-samples per event would yield 162 total samples to be collected, processed, recorded and transported. This

would require a significant amount of labor. A labor cost estimate, based on an estimated 100 hours of labor at $30 per hour is $3,000. The cost of analyzing the 54 composite samples, $400 per sample at a certified laboratory, is $21,600. This yields a total annual cost of approximately $25,000.

I do not question the proposed methodology. It would certainly yield accurate results and would precisely monitor the wastewater application.

I do not question the need to monitor wastewater application. I believe that dairies, as responsible members of the San Joaquin Valley's agricultural business community, must do their part to protect groundwater.

However, I do question the benefit of the extra precision as opposed to less precise but far less costly and time-consuming methods. The methods proposed above will provide large amounts of data, but as a practical matter, the large quantity of collected data does not enhance the ability of the dairyman/farmer to apply the wastewater more efficiently or agronomicly than he otherwise would using simpler and less costly methods.

The existing protocol at Sierra View Dairy is to collect wastewater samples from the retention pond twice per year, in the spring and in the fall. The samples are collected by opening a valve on a small pipe tapped into the 8-inch outflow pipe while the retention pond is agitated and the wastewater is pumped to a field. The pond condition and pond level are noted at the time the sample is taken. The sample results, usually received about two weeks after the sampling event, are recorded on an historical log of all previously taken retention pond samples. The new sample results are averaged with all previous results. The averaged concentration levels, thus obtained, are used for calculating the amount of salt and nitrogen applied during wastewater applications for the current year.

It is my opinion that the additional precision afforded by more frequent sampling does not improve wastewater management. Over time, the average wastewater concentration level obtained by twice a year sampling will closely match the average obtained by more frequent sampling. This is because the retention pond conditions affecting concentration levels (water depth, seasonal water inflow factors, etc.) will tend to vary somewhat randomly over time, thus tending to average to the same value obtained by more frequent sampling.

Although this method to control nutrient application is not ideal because the concentration levels of the wastewater vary somewhat with different pond levels and other factors, application rates to individual parcels tend to "average out" over a period of time. This is because an irrigation run typically encompasses multiple parcels and because a run is almost never started on the same parcel twice in a row.

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Also, more precise application control is not possible with the existing irrigation facilities at Sierra View Dairy. This is because the wastewater and irrigation pumps are either "on" or "off". Restricting flow from these pumps (to attempt more precise application) is not desirable because this greatly reduces the efficiency of the pumps and thus increases the cost of operation and energy consumption.

Respectfully,

Ken De Groot
Owner, Sierra View Dairy